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(54) **METHOD FOR INDUCING AND FURTHER PROPAGATING FORMATION FRACTURES**

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See application file for complete search history.

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(57) **ABSTRACT**

Fractures are induced from lobe shaped inflatable members disposed at different axial locations along a string with frac ports in the circumferential gaps between the lobes. The lobes are inflated by landing a ball on a seat on a sleeve that is initially shifted enough to expose a fill port on each lobe. The lobes are inflated to a pressure that initiates fractures in the formation as the lobes extend. Further raising the pressure induces the sleeve to move a second time to open frac ports. The annulus can be cemented and fracturing can penetrate the cement to further propagate the initiated fractures from lobe inflation. The process is repeated at different levels until the zone of interest is completed. Sensors can relay information by telemetry techniques as to the onset of fractures or other well conditions. The sleeve for the frac ports can be moved in a variety of ways without intervention tools.

19 Claims, 3 Drawing Sheets